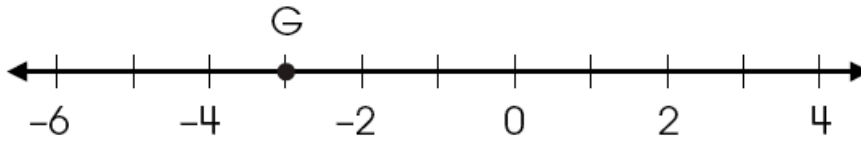


5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 27
Benchmark A
March 2008

Point G is shown on this number line.

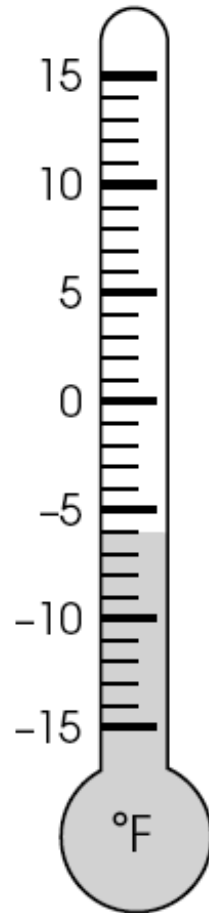


Which number does point G represent?

- A. -5
- B. $-4\frac{1}{2}$
- C. -3
- D. $-2\frac{1}{2}$

Question 28
Benchmark A
March 2006

28. Mary checked the outside temperature.



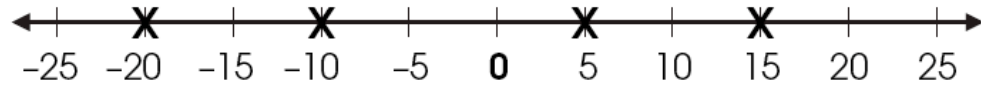
What temperature is shown on the thermometer?

- A. -6°F
- B. -4°F
- C. 4°F
- D. 6°F

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 14
Benchmark A
Spring 2007

14. Four numbers are marked with an X on this number line.



Which marked number is the least?

- A. -20
- B. -10
- C. 5
- D. 15

Question 6
Benchmark B
Spring 2009

6. Which fraction is equivalent to $\frac{8}{12}$?

A. $\frac{1}{3}$

B. $\frac{1}{4}$

C. $\frac{2}{3}$

D. $\frac{3}{4}$

5th Grade Mathematics Ohio Achievement Test
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Question 10
Benchmark B
March 2006

Maria found the same pair of shoes on sale at three different stores. All the stores have the same original price. The first store has the shoes on sale for $\frac{1}{3}$ off. The second store has them on sale for 20% off. The third store has them on sale for one-fourth off.

In your **Answer Document**, determine which store has the best sale for the shoes. Explain your answer, using pictures, numbers or words. (2 points)

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 40
Benchmark B
March 2006

Marco is simplifying fractions.

Which fraction should he use to simplify $\frac{9}{12}$ to lowest terms?

A. $\frac{2}{2}$

B. $\frac{3}{3}$

C. $\frac{9}{9}$

D. $\frac{12}{12}$

Question 32
Benchmark B
Spring 2007

Which fraction is equivalent to 40%?

A. $\frac{1}{5}$

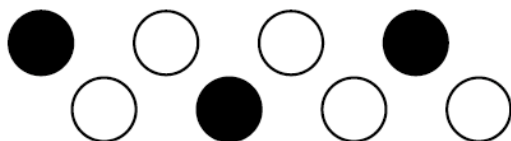
B. $\frac{2}{5}$

C. $\frac{3}{5}$

D. $\frac{4}{5}$

Question 1
Benchmark D
March 2008

This diagram represents Melvin's marble collection.

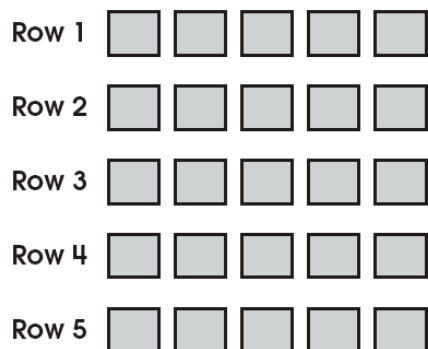


What is the ratio of black marbles to total marbles?

- A. 3:5
- B. 3:8
- C. 5:3
- D. 8:3

Question 10
Benchmark D
March 2008

Mrs. Garner's classroom had 25 desks. They were arranged in 5 rows that each contained 5 desks.

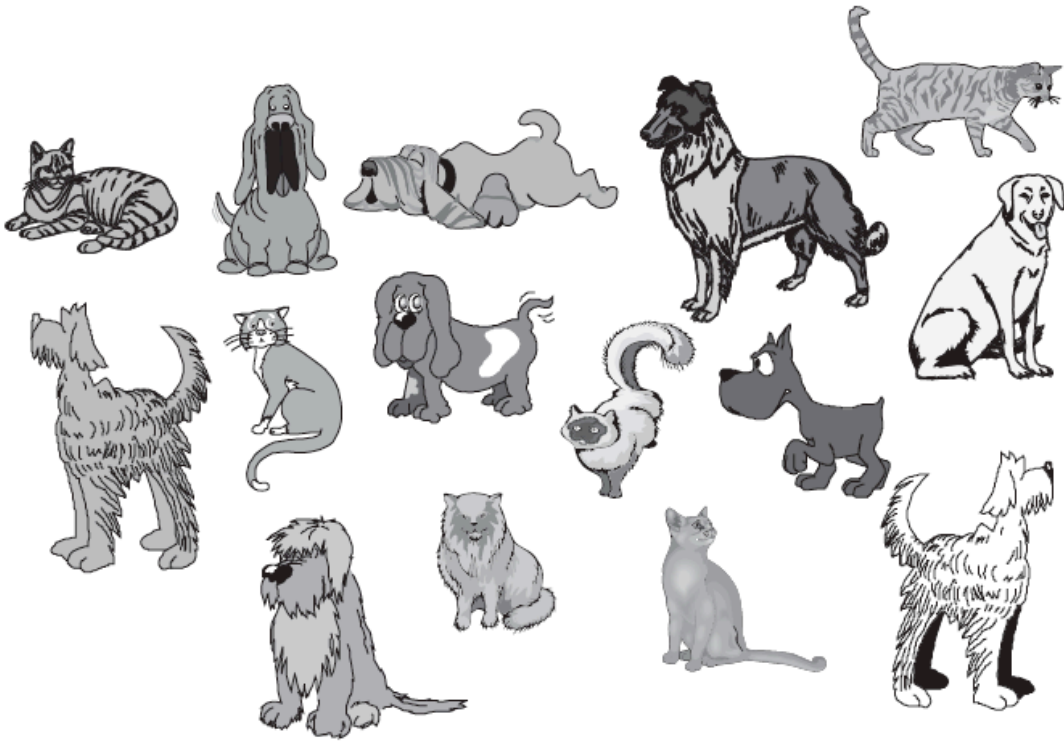


In your **Answer Document**, write the fraction of the desks that are in Row 1. Write this fraction as a percent. Show or explain your work.

Another classroom has between 15 and 22 desks with the same number of desks in each row. Row 1 has 25% of the desks in this classroom. Draw an arrangement of the desks in this classroom. How many desks are in Row 1? (4 points)

Question 35
Benchmark D
March 2006

35. John saw 6 cats and 9 dogs in the veterinarian's waiting room.



What is the ratio of cats to dogs?

- A. 6:9
- B. 6:15
- C. 9:6
- D. 9:15

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 2
Benchmark D
Spring 2007

Colleen ran a race in 27.28 seconds.

What is her time rounded to the nearest tenth of a second?

- A. 27.0 seconds
- B. 27.2 seconds
- C. 27.3 seconds
- D. 28.0 seconds

Question 28
Benchmark D
Spring 2007

28. Part of this rectangle is shaded.



Which number represents the shaded part of the rectangle?

- A. 25%
- B. 0.3
- C. $\frac{1}{3}$
- D. 75%

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 9
Benchmark E
Spring 2009

Ms. Lin is making a display of 120 pictures. The display area can fit 10 pictures in each row. Ms. Lin can find the number of rows (r) she will need with this equation:

$$10 \times r = 120$$

Which equation could she also use to find the answer?

- A. $120 + 10 = r$
- B. $120 - 10 = r$
- C. $120 \times 10 = r$
- D. $120 \div 10 = r$

Question 23
Benchmark E
March 2006

Simplify: $9 \div 3 + 6 \times 5$

- A. 5
- B. 6
- C. 33
- D. 45

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 44
Benchmark F
Spring 2009

44. There are five groups of students. Each group cuts out 20 blue stars and 25 red stars. The total number of stars the groups cut out is shown by this expression.

$$5 \times (20 + 25)$$

Which other expression represents the total number of stars?

- A. $(5 \times 20) + 25$
- B. $20 + (5 \times 25)$
- C. $(5 + 20) \times (5 + 25)$
- D. $(5 \times 20) + (5 \times 25)$

Question 46
Benchmark F
March 2006

Shelly's photo album has 6 sections. Each section has 16 pages. Each page has 5 pictures. To find the total number of pictures in the album, Shelly needs to multiply $6 \times 16 \times 5$.

Which other expression represents the total number of pictures in the album?

- A. $(6 \times 16) + (6 \times 5)$
- B. $(6 + 16) + 5$
- C. $(6 + 5) + (16 + 5)$
- D. $6 \times 5 \times 16$

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 29
Benchmark H
Spring 2009

29. Two students added decimals.

Scott

$$\begin{array}{r} 3.54 \\ + 1.6 \\ \hline 3.70 \end{array}$$

Meg

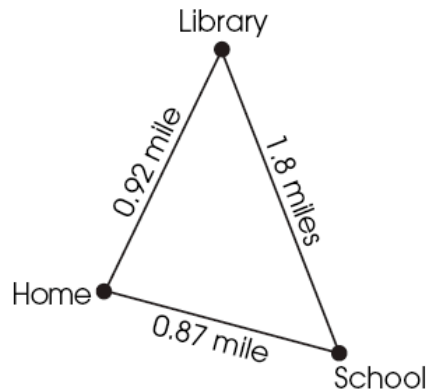
$$\begin{array}{r} 3.54 \\ + 1.6 \\ \hline 5.14 \end{array}$$

In your **Answer Document**, use pictures, numbers or words to explain which student correctly added the decimals. (2 points)

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 20
Benchmark H
March 2006

20. The diagram shows how far it is from Anna's home to her school, from her school to the library, and from the library to her home.



Each school day, Anna rides her bike from her home to her school. After school, she rides to the library and then home. On Saturday, Anna rides her bike from home to the library and back home. She does not ride her bike on Sunday. Anna's mother says that her daughter rides about 30 miles every week between her home, the school and the library.

In your **Answer Document**, use estimation to determine whether Anna's mother has made a reasonable estimate. Show or explain your work.
(4 points)

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 37
Benchmark I
Spring 2009

37. The price of potatoes is \$0.59 per pound. The scale shows the weight of some potatoes.



Which is a reasonable estimate for the cost of the potatoes?

- A. about \$2
- B. about \$3
- C. about \$5
- D. about \$6

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 40
Benchmark I
Spring 2009

A recipe calls for $\frac{3}{4}$ cup of sugar. The cook has only $\frac{1}{3}$ cup of sugar.

How much sugar does the cook still need?

- A. $\frac{2}{12}$ cup
- B. $\frac{4}{12}$ cup
- C. $\frac{5}{12}$ cup
- D. $\frac{13}{12}$ cups

Question 39
Benchmark I
March 2008

Cammie rounded a length to 3.37 meters.

Which length could be the actual length she measured?

- A. 3.372 meters
- B. 3.376 meters
- C. 3.382 meters
- D. 3.471 meters

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 7
Benchmark I
March 2006

Peggy sold a total of 6,198 vanilla and chocolate ice cream cones during the carnival. About half the cones she sold were vanilla.

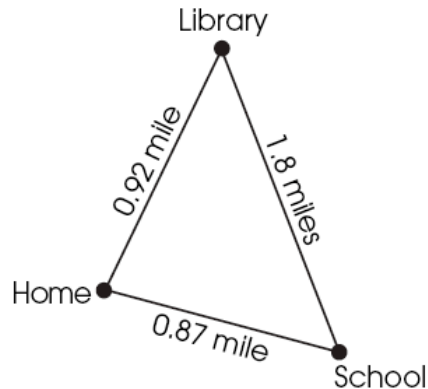
Which estimate is reasonable for the number of chocolate ice cream cones sold?

- A. 2,500
- B. 3,000
- C. 3,500
- D. 6,000

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 20
Benchmark I
March 2006

20. The diagram shows how far it is from Anna's home to her school, from her school to the library, and from the library to her home.



Each school day, Anna rides her bike from her home to her school. After school, she rides to the library and then home. On Saturday, Anna rides her bike from home to the library and back home. She does not ride her bike on Sunday. Anna's mother says that her daughter rides about 30 miles every week between her home, the school and the library.

In your **Answer Document**, use estimation to determine whether Anna's mother has made a reasonable estimate. Show or explain your work.
(4 points)

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 26
Benchmark I
March 2006

There are 2,382 paintings in an art museum. The museum has 124 rooms.

Which is a reasonable estimate for the number of paintings in each room?

- A. 10
- B. 20
- C. 30
- D. 200

Question 37
Benchmark I
March 2006

Russell bought $2\frac{1}{8}$ pounds of turkey and $3\frac{3}{4}$ pounds of roast beef to make sandwiches.

Which estimate is reasonable for the amount of meat he bought?

- A. 4 pounds
- B. 5 pounds
- C. 6 pounds
- D. 7 pounds

5th Grade Mathematics Ohio Achievement Test
Number Sense and Operations Standard

Question 42
Benchmark I
Spring 2007

A class needs 64 brownies for a bake sale. Mike brings 28 brownies.

In your **Answer Document**, write two number sentences using different operations to find the number of brownies the class still needs for the bake sale. (2 points)